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Gockel, A. Bemerkungen über die Abhängigkeit der elektrischen Leitfähigkeit der Atmosphäre von meteorologischen Faktoren. Pp. 257-259.

Zölls, Bonifaz. Ueber Messungen des atmosphärischen Potentialgefälles in Kremsmünster. Pp. 260-263.

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Hammer, —. Ueber die Barometerformel von Laplace. [Review of article of L. Maillard.] Pp. 123-124.

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Rudolph, H. Luftelektrizität, Eigenladung der Erde und Aktivität der freien Luft. Pp. 213-218.

Hegyfoky, J. Zur jährlichen und täglichen Periode der Wolkengeschwindigkeit. Pp. 220-224.

Exner, Felix M. Messungen der Intensität der Sonnenstrahlung auf Spitzbergen. Pp. 224-225.

— F. A. Förel über die Kontinuität des Bishofschen Ringes. Pp. 225-226.

Reimann, —. Ring um die Sonne. P. 226.

— Lad. Gorczynski über die Abnahme der Intensität der Sonnenstrahlung im Jahre 1902 und 1903. P. 226.

Exner, Felix M. Atmosphärische Radio-Aktivität in hohen Breiten. Pp. 226-227.

— J. Elster und H. Geitel über die radioaktive Substanz, deren Emanation in der Bodenluft und der Atmosphäre enthalten ist. P. 227.

— Luftelektrische Messungen im Hochtal von Arosa. Pp. 227-228.

— J. Hann über die Luftströmungen auf dem Gipfel des Säntis (2504m) und ihre jährl. Periode. Pp. 228-230.

Ehrenfeucht, —. Ueber die doppelte tägliche Oszillation der Windrichtung in Warschau. Pp. 230-231.

Ed. Mazelle. Ueber den Einfluss der Bora auf die tägliche Periode einiger meteorologischer Elemente. P. 231-232.

Friesenhof, —. Die Temperatur-Depressionen im Monate Mai, zugleich ein Beitrag zur Frage der Eismännerperiode und des Urbans. Pp. 232-235.

— Barometerbeobachtungen in Langenburg am Nyassa. Pp. 235-236.

— Ueber Abnahme der Horizontal-Intensität des Erdmagnetismus. P. 237.

Weber, L. Zur Gewitter-Fernregistrierung. P. 237-238.

Nitzl, —. Einfluss der Aufstellung des Regenmessers. P. 238.

— Klima von Köln a Rh. Pp. 238-239.

Hann, J. Die Jahressummen des Regenfalles zu Padua 1725-1900. P. 239.

Danckelman, von. Regenbeobachtungen aus Siam. Pp. 240-241.

Hann, J. Meteorologische Beobachtungen auf der Insel Juan Fernandez im Jahre 1901-1902. Pp. 241-242.

Friesenhof, —. Wolkenbruch im Quellgebiet der Neutra, Ungarn. Pp. 242-243.

Konkoly, Nik. Thege von, Jr. Ein trockener Tag. Pp. 243-244.

Mk. Der Januar 1904 in Tokio. 244-245.

— Ausserordentlich hohe Temperaturen im April 1904 in Belgien. P. 245.

— Der internationale Wolken-Atlas. Pp. 245-246.

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Bracke, A. Onze wolkenwaarnemingen. Pp. 12-14.

NOTES AND EXTRACTS.

TORNADO IN INDIAN TERRITORY.

Mr. C. M. Strong, Section Director, Oklahoma, Okla., sends data relative to a tornado on April 24. The tornado was first heard of at Choteau, Ind. T. It began in the Verdigris River bottoms, and extended northeast to the northern part of the Cherokee Nation country. Destruction is reported from Choteau, Fairland, and Clearwater. Large hailstones and a deluge of rain accompanied the tornado in the Cherokee Nation. A general electric storm prevailed all day, followed by a heavy downfall of rain and then by the tornado.

The postmaster at Ketchum reports that the storm passed through that place about 12 o'clock (probably central time), leaving the river bottom and striking the hills and then the prairie beyond. The storm was visible for five or ten minutes as it passed in a northeast direction, a little east of Ketchum. It moved up the Grand River Valley, reaching Cleora, Ind. T., 7 miles south of Afton, on Sunday, April 24, at 12:25 p. m.

The postmaster at Afton thinks possibly there were two storms traveling parallel with each other 6 or 7 miles apart, each of them destroying everything it came in contact with when it descended to the ground, and each path of destruction ranging from 150 to 300 feet wide. As a rule houses that were destroyed were carried and scattered to the northeast. The storm was pretty generally over in twenty minutes, covering a territory measuring 6 or 7 miles east and west and 30 miles north and south.

The postmaster at Fairland says: "Storm came at 12:35 p. m., after a heavy rain of about thirty minutes with some hail. It was noticed some half hour before, but thought it was going west of us. It came from the south and lasted about one min-

ute. The path of the destructive wind was about 400 yards wide; débris was thrown in all directions. Some observed the funnel-shaped cloud, but I did not. The cloud lifted after leaving here and no damage was reported north of us."

It was last observed at Fairland. The funnel cloud was noted, but the first intimation of the approach of the tornado was a loud, roaring noise. The general direction of the path was north and east, and the width of the path of destruction about one-fourth of a mile.

From Choteau to Fairland the track covers about 60 miles in length. The storm is said to have been the worst that has been known in the Indian Territory.

TORNADO AT GRAND RAPIDS, MICH.

The following details of a tornado at Grand Rapids, Mich., on March 24, are obtained from the report of Mr. C. F. Schneider, Section Director at that place. The tornado moved in a due northeasterly direction across the southeastern portion of the city, over a path about 2 miles long and from 25 to 200 feet in width. Nothing could be learned regarding the appearance of the sky or the atmosphere during the passage of the tornado, because it had been a wet, stormy evening, and almost everyone was indoors.

At the Weather Bureau office, distant about 2½ miles from the nearest point of the storm's path, the records show a steadily increasing southeasterly wind from about 8 p. m. (seventy-fifth meridian time), until 10 p. m., when it had reached a velocity of 32 miles. At 10:05 p. m., when the wind had suddenly shifted to the southwest, it attained a maximum velocity of 52 miles. It then decreased with equal sudden-